

## Patent Application of

Billy Ray Delp, United States citizen, 2800 N. Meridian Ave. Oklahoma City, Ok. 73107-1041

for

TITLE: EXERCISE DEVICE PORTABLE ABDOMEN REDUCER

CROSS-REFERENCE TO RELATED APPLICATIONS Not Applicable

FEDERALLY SPONSORED RESEARCH Not Applicable

SEQUENCE LISTING OR PROGRAM Not Applicable

BACKGROUND OF THE INVENTION--FIELD OF THE INVENTION

0001 The invention relates to the size reduction of the abdomen and the exercise of other muscles of the human body.

BACKGROUND OF THE INVENTION--PRIOR ART

0002 During 1952-1954 while in the infantry, we had an Exercise Training Manuel 21-20 which we called the army daily dozen. One of the exercises was a sit-up where one soldier would hold down his partners feet in order to do the full sit-up exercise. Then we would alternate positions. I think they did not want one soldier to have all the fun.

0003 My research of patents on exercise equipment dates back to 1882. Since then there have been numerous patents issued. Most of these patents are for large equipment suitable for free standing or stationary use. Those patents do not fall into our category.

0004 Many patents for smaller devices are movable, free standing with no alternative support for leverage. This category includes U.S. Patents (a) 6,592,497 B2 to Greenheck (2003), (b) 6,592,500 to McBride et al (2003), (c) 6,582,347 B2 to Smith (2003) and (d) D476,384S to Perez (2003). These patents do not fit our category but should be considered. Other patents are designed to be

installed on doors or other stationary objects but are suitable for conditioning only biceps and other upper body muscles.

0005 My research has been narrowed down to 14 patents which are similar to my invention. Those are: U.S. Patents (a) 5,328,435 to Ricks (1994), (b) 4,787,626 to Gallagher (1988), (c) 4,602,782 to Carlson (1986), (d) 4,591,148 to Slater (1986), (e) 4,468,022 to Wu (1984), (f) 4,457,510 to Pertschuk (1984), (g) 4,185,816 to Bernstein (1980), (h) 4,121,825 to Hult (1978), (i) 4,116,434 to Bernstein (1978), (j) 2,425,971 to Walker (1947), (k) 2,050,652 to Fleming (1936), 1,905,019 to Turner (1933), (m) 1,705,745 to Anderson (1929), and (n) Des.203,836 to Hass (1966). All of the foot supports of the above patents are rigid and can not be adjusted. Also they are large, heavy, cumbersome devices and not conducive to being readily transported. My device can be put in a small bag and used at any destination that has a piece of furniture , a door or a bed on which to anchor.

0006 In addition there are 2 U.S. Patents (a) 4,515,361 to Melillo et al (1985) and (b) 3,134,592 to Sharkey (1964). These patents are to be used in conjunction with a household bed. They do have some relation to my invention in that my invention covers this area also.

0007 Although each of the above patents have different configurations they are not adjustable, are bulky, rigid, and/or are not readily portable in a small container. None of the above patents have a chain and handle to assist the larger individuals in doing a full pullup.

0008 All of the above patents could be criticized individually but those are their creations and I am very uncomfortable doing so. The only reason I do is that several fellow members of the Oklahoma Inventors Congress stated that it is important. My invention can stand on its own merit.

0009 The following will demonstrate how we solved the above stated problems with improvements such as adding a chain and handle for more convenient usage, making the device

flexible and cutting down on the weight of the device.

## BACKGROUND OF THE INVENTION--OBJECTS AND ADVANTAGES

0010 Accordingly, besides the objects and advantages of the exercise device described above, my invention is far superior to any of them. My objects and advantages are:

(a) My exercise device is so versatile it can be adapted to various anchors. For situps these anchors include, but are not limited to, doors, furniture, beds, or most stationary locations. For pullups these anchors can be doors, rafters, childrens swing sets or any overhead location that will support the weight of the user.

(b) My exercise device is adjustable so that it will fit the size of any individual.

(c) My exercise device has a chain extending to a handle. This chain and handle is designed so that those who can not do a full situp will be able to bend farther than they would otherwise.

(d) My exercise device is designed to benefit the legs, abdomen, lower back, biceps and upper body muscles. The emphasis however is on the abdomen muscles.

(e) My exercise device is lightweight, flexible and easily transported in a small bag or in luggage

(f) My exercise device is simple and inexpensive to manufacture. The savings can be passed on to the consumer..

(g) My exercise device has padding on the anchor assists so that they will not mar the anchor.

Further objects and advantages will become apparent upon reviewing ensuing description and drawings.

## SUMMARY

0011 In accordance with the present invention my exercise device is versatile, adjustable, has a chain and handle for assistance, exercises numerous body muscles, is lightweight, inexpensive to

manufacture and has padding to save scratches on the anchors.

## DRAWINGS--FIGURES

0012 Fig. 1 is a perspective view of the basic invention

Fig. 2 is a perspective view of the handle unit with handle grip and handle adjusting chain.

Fig. 3 is a perspective view of the foot retainer bar with handle adjusting hook, foot retainer adjusting hook, end caps, foot cushions and door anchor assist.

Fig. 4 is a perspective view of three anchor assist items.

## DRAWINGS--Reference Numerals

0013	05 Handle	06 Handle Grip
	07 Handle Adjusting Chain	08 Handle Adjusting Hook
	09 Foot Retainer Bar	10 Foot Retainer Chain
	11 Foot Retainer Adjusting Hook	12 Foot Cushion
	13 Foot End Cap	14 Door Anchor Assist
	15 Door Anchor Assist Padding	16 Furniture Anchor Assist
	17 Furniture Anchor Assist Padding	18 Rope Anchor Assist

## DETAILED DESCRIPTION--Fig. 1-3 PREFERRED EMBODIMENT

0014 A preferred embodiment of the present invention is illustrated in Fig. 1-3. The exercise device has a handle **5** equipped with handle grips **6** for stability and comfort. There is a handle adjusting chain **7** extending to the handle adjusting hook **8** which is also attached to the foot retaining bar **9**. The foot retainer bar has a foot cushion **12** for comfort and foot end caps **13** for safety. From the foot retainer bar a foot retainer chain **10** extends to the foot retainer adjusting hook

**11.** The foot retainer adjusting hook is attached to the door anchor assist **14** which is one of of three anchor assist items.

**0015** Fig.4 contains three anchor assist items. The door anchor assist fits under the door for situps and over the door for pull ups. The door anchor assist has door anchor assist padding **15** which protects the door from scratches and wear. The furniture anchor assist **16** fits under the leg of furniture or can be used for other anchoring items. The furniture anchor assist also has furniture anchor assist padding **17** for protection of anchors used. The rope anchor assist **18** can be used on any item of furniture, including the bed, furniture legs, pipe and other stationary items for situps. The rope anchor assist can also be used for pullups and anchored to any overhead anchor that will support the weight of the individual.

## **OPERATION**

**0016** The manner of operation of the exercise device tummy trim is similar to those patents already awarded that aid in situps and pullups. Namely the devices can be attached to a stationary device or can be free standing. Some are very large and not readily transportable. Some are designed to do only one task. None that I have found has the handle assist mechanism. To operate, first select one of the anchoring devices **14**, **16**, or **18** and affix it to a stationary anchor. From the anchoring device proceed to and install the foot retainer adjusting hook **11** to the anchoring device and the foot retainer chain **10** which is a part of the foot retainer bar **9** . From the foot retainer bar proceed to the handle adjusting chain **7** and install via the foot retainer adjusting hook **8**. This operation also installs the handle **5**. This operation is all contained in Fig.1. The individual is now ready to commence the exercises.

**0017** From the description above, a number of advantages of my exercise device portable

abdomen reducer becomes evident:

- (a) This device can be manufactured largely with low cost stock items which are readily available to the manufacturer. The savings can be passed on to the consumer.
- (b) The device is small and light weight so that it can be readily transported in a small bag or luggage.
- (c) The device can be installed by any individual without tools.
- (d) For decades the population in America has been shifting from hard labor jobs to employment in a more sedentary position. We still eat meals as if we are going to do a hard days work. My device will help alleviate the conditions associated with this problem as you will see in the following.
- (e) I quote an article from the Center for Disease Control Foundation entitled "OBESITY a Growing Epidemic". "The number of obese adult Americans increased more than 50 percent between 1980 and 2000. The increase of overweight young people has been even more dramatic. Between 1980 and 2000, the number of overweight children and adolescents in the United States tripled." This has been brought on by a number of reasons, among them is the lack of exercise. My device will help alleviate this.
- (f) Also in the Center for Disease Control Foundation article, "Obesity is a major public health concern because it is associated with chronic disease, including cardiovascular disease, diabetes and some types of cancer. In children, being overweight leads to hypertension, abnormal lipid values, sleep apnea, gallbladder disease. and bony abnormalities - particularly of the legs. Type 2 diabetes, formerly called adult onset diabetes, is now occurring in adolescents." My device will help alleviate this.

(g) Proper exercise will alleviate much obesity, cut down on disease attributed to obesity, keep people out of hospitals and make people respect and feel better about themselves. My device can help our population achieve their goals of good health and physical fitness.

0018 The foregoing description is included to illustrate the operation of the preferred embodiments and is not meant to limit the scope of the invention. The scope of the invention is to be limited only by the following claims and their legal equivalents, rather than by the examples given.